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ABSTRACT

City-as-School (CAS) is a New York City Board of Education independent alternative high school whose primary curriculum objective is to link students with hundreds of learning experiences throughout the community. Students receive academic credit for each learning experience successfully completed. Credit is determined by the nature of the activities detailed within an unusual curriculum design, LEAP (Learning Experience Activities Package). Each LEAP, which constitutes the students' course work, consists of a series of content area goals and behavioral tasks to attain those goals in ways unique to each particular community resource and its site facilities. Students do not attend classes in one building but move from one learning experience to another based on their chosen program. A small core of in-house classes provides enrichment and remediation when no appropriate external resource is available. CAS consists of five components (administration, admissions, guidance, resource services, student services) adaptable in whole or in part. Schools choosing to replicate this program receive a demonstration manual (at cost) with component descriptions and forms. CAS participants have significantly increased their school attendance, number of Carnegie units attempted, and proportion of Carnegie units completed and passed and have a significantly lower dropout rate. (CAS data in the form of statistical tables are appended.) (YLB)

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PROGRAM AREA: Alternative Education; Drop-Out Prevention

I.A. PROJECT TITLE: City-As-School (C.A.S.)

LOCATION: 16 Clarkson Street

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- B. ORIGINAL DEVELOPER: Frederick J. Koury, Principal, with a grant from the Ford Foundation/New York City Board of Education
APPLICANT AGENCY: New York City Board of Education

- C. YEARS OF PROJECT: 1972-1973 Project Initiated
 1976-1977 New York State Validation Study
 1978-1979 New York State Validation
 1978-1981 ESEA IV-C Funding- Dissemination
 1980-1981 JDRP Validation Study
 JDRF Validation
 1985-1986 NDN Funding- Dissemination
 JDRP Recertification Study

D. SOURCE(S) AND LEVEL(S) OF FUNDING:

<u>YEAR</u>	<u>FEDERAL</u>	<u>STATE</u>	<u>LOCAL</u>	<u>TOTAL*</u>
1972-86			New York City Board of Education	\$7,619,473
1979-81		ESEA IV-C Validation/ Dissemination Grant		115,754
1985-86	NDN Dissemination Grant			47,901

*See APPENDIX A for breakdown by year.

II. DESCRIPTION OF PROGRAM:

City-As-School is a New York City Board of Education independent alternative high school whose primary curriculum objective is to link students with hundreds of learning experiences throughout the community. The underlying concept of C.A.S. is that the world of experience can be joined with the world of learning, thereby making school more relevant for those students who might otherwise have dropped out.

A. GOALS:

1. To significantly increase CAS participants' school attendance.
2. To significantly lower CAS participants' dropout rate.
3. To significantly increase the number of Carnegie units CAS participants attempt.
4. To significantly increase the proportion of Carnegie units CAS participants complete and pass.

B. PURPOSES AND NEEDS ADDRESSED:

Because CAS is an independent, diploma-granting alternative High School, accepted students are required to transfer from their home high school to this school. Based upon written testimony from their intake forms, those students choosing to enter CAS have usually found the traditional school setting uninteresting, threatening or unrelated to their present or future plans.

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Failure patterns or disinterest have caused many of these students to be truant or to "hang out" at school. Anecdotal Guidance Counselor referrals, and a review of previous attendance patterns, course completion records and academic achievement reported by official school records, resulted in the majority of students entering CAS being identified as potential dropouts from their home school. Additionally, there are a large number of students with a moderate to great degree of success in the traditional setting who began to look for new horizons for their education before their academic requirements had been completed. Whatever their individual story, what all these students exhibited was a resistance --either overt or passive --to the traditional school setting.

C. INTENDED AUDIENCE:

1. Grade Level: 9-12
2. Content Area: Curriculum design for all subjects.
3. Ability Level: Works for all ability levels, but especially well with Talented and Gifted
4. Test Scores: None required. Previous academic performance is neither a prerequisite for admission, nor an indicator of success level in the program

D. BACKGROUND, FOUNDATION AND THEORETICAL FRAMEWORK:

While a comprehensive history of the alternative school movement is readily available,¹ the start of this particular alternative approach may be traced to two documents: One, submitted to the New York City Board of Education,² dated, 1971, and the other, submitted by the NYC Board of Education to the Ford Foundation,³ dated February, 1972. In the former document, it was determined that the program would

attempt to make a substantial contribution to the following problems...:

- the lack of racial and ethnic integration...
- the insufficient use of the cultural and educational resources of the city [and]
- the lack of collaborative rapport between students and faculty...⁴

To the team of both students and teachers who visited the two predecessor models of "schools without walls" in Philadelphia (Parkway) and Chicago (Metro), it became "Utterly clear that no [traditional]... high school could possibly hope to duplicate within its own walls, the resources available... in their local community."⁵ CAS was thus, designed to "be the first program which had this kind of education as a major focus..."⁶

E. FEATURES: HOW THE PROGRAM OPERATES:

1. Logic:

It is hypothesized that by implementing an institutional change, student behaviors, as reflected by specific measurements, will also change.

2. Scope:

CAS is an independent, diploma-granting, New York State validated public high school. However, it was originally conceived --and still views itself --

- as a potential plan for existing high schools to institute change within their own on-going structure.
- as a prototype for the establishment of small alternative high schools throughout the city...
- as a model on which... various local [communities] can eventually establish their own small alternative public high schools...⁷

3. Curriculum and Instructional Approach:

Each student receives academic credit for each learning experience successfully completed. Credit is determined by the nature of the activities detailed within an unusual curriculum design referred to as a LEAP (Learning Experience Activities Package). Created in collaboration with both the resource contact and the CAS Instructor, each LEAP --which constitutes the students' course work --consists of a series of content area goals and behavioral tasks that are designed to attain those goals in ways that are unique to each particular resource and its site facilities. Provision is made to allow students to modify their projects to achieve the goals.⁸ The activities are accredited with subject area credit in accordance with New York State curriculum guidelines and were validated by the New York State Department of Education. The curriculum design is such that it is usable accross the subject area spectrum.

4. Learning Materials:

APPENDIX B contains two sample curriculum in different subject areas to illustrate the scope of subject possibilities. Learning experiences are in all areas of instruction. Students receive either credit or no credit rather than letter or numerical grades.

5. Staff Activities and Staffing Patterns:

Teachers operate in a unique way at CAS. They are divided into two majors roles: **Teacher-Advisors** and **Resource Coordinators**.

The **Teacher-Advisors** have direct contact with a group of 80-85 students each. These teachers hold weekly orientation, seminar and/or class meetings with small groups of students at which time official class business is also carried on. Advisors are also responsible for holding individual meetings with students and/or parents, analyzing permanent record card data, writing college evaluations for students and doing cyclical registration.

Resource Coordinators are responsible for establishing new Resources (i.e. Community site placements), developing curriculum for each learning experience, monitoring student progress, responding to student problems at Resources, conducting student-Resource conferences and registering students. Visits to Resources throughout the city are required, as well as phone contact with Resources and students.

CAS operates out of a former school building, but most of the former classrooms have been converted into administrative space. In the treatment year CAS was staffed as follows:

1 Principal	10 Resource Coordinators
2 Assistant Principals	1 Guidance Counselor
2 Administrative Assistants	3 Secretaries
1 Librarian	1 Admissions Coordinator
11 Teacher Advisors	10 Paraprofessionals
1 Social Worker	

6. Learner Activities:

CAS operates unlike any other school in N.Y.C. Students are accepted to the school on the basis of supervised peer interviews. Instead of attending classes in one building, students move from learning experience to learning experience based on a program they choose by consulting the CAS catalogue. Students spend up to 27-32 hours per week at one or more learning experiences conducted by community resources. These Resources are organizations of a business, civic, cultural, political, etc. nature. A few examples are:

Office of Senator D'Amato
Long Island University
Africa Report Magazine

New York Eye and Ear Hospital
NY Botanical Gardens
Marvel Comics

CAS maintains a small core of in-house classes for enrichment and remediation when no appropriate external Resource is available. However, more than 95% of most students' time is spent in learning experiences away from the CAS home base.

7. Staff Development Activities:

In the original proposal for CAS, it was noted that "In designing this... program,... New York City [was]... making an educated assumption: that the basic need in the high schools [was]... for a radical change in the authority patterns of the traditional schools," that would allow "teachers the opportunity to think, to reexamine their role... their job [and] to change."⁹ As a consequence, teachers share in policy-making procedures at peer-level department meetings and committee membership. Teachers operate in such varied activities that they become subject-area generalists, problem solvers, public relations specialists and personnel placement officers. All staff are encouraged to take on the various roles available.¹⁰

8. Management Activities:

See part 5, above.

9. Monitoring and Evaluation Procedures:

Staff members are in continual phone or on-site contact with students. Academic evaluation is measured by the completion of the tasks required in the LEAP (see part 3, above).

F. SIGNIFICANCE OF PROGRAM DESIGN AS COMPARED TO SIMILAR PROGRAMS:

(1). How innovative is it?

CAS was not the first program to view education as occurring beyond the traditional school building (see part D, above), but it was the first to make this type of education the major focus of its operation. 95% of students' programs are conducted at community placement sites. It differs from previous and existing internship programs in that (a) students play an active role in their educational experience, (b) the entire resources of a community may be involved in educating students and (c) large amounts of students, because of the CAS developed evaluation procedures, are enabled to benefit.

(2). How cost effective is it?

The New York City Board of Education uses an elaborate formula that allots each school a number of units based on its enrollment. Each unit may be used, in a limited way, at the Principal's discretion to apply to staff, supplies or miscellaneous costs. Based on an elaborate unit-cost ratio, the average 1984-85 cost per pupil in a New York City regular high school was \$3,025.00. Using this same formula, CAS' per pupil cost was \$2,486.07, or very comparable to an average high school. If structure, maintenance and building costs are subtracted (most replicating districts will have these items in place anyway), the costs per pupil fall dramatically.

(3). How responsive is it to state-of-the-art standards in the field?

In many ways, CAS sets the state-of-the-art standards in this particular educational field. Its staff has both written, and been written about, in national periodicals and has been the subject of numerous TV documentaries¹¹. However, this unique collaborative set up, has allowed and encouraged the staff to continually modify the program as necessary. Particular attention has most recently been focused on

problems of growth and expansion into other sites and continuing discussions at departmental meetings are evolving new approaches.

III. POTENTIAL FOR TRANSPORTABILITY:

A. SETTINGS AND PARTICIPANTS (Development and Evaluation Sites):

New York City is an urban community covering 359 square miles with a metropolitan population of approximately 8 million. This population is an amalgam of virtually every ethnic, social and economic group found throughout the United States, but its dominant public school enrollment is Black and Hispanic. Because CAS accepts a cross section of the high school population of New York City's five boroughs, the ethnic composition is as varied as is the city's. In October, 1985, the year of this study, the ethnic breakdown of the student body was as follows:

<u>Ethnic Composition</u>	<u>Number of Students</u>	<u>Percentage</u>
Black	221	34.4
Hispanic	150	23.3
Oriental	27	4.2
Other	245	38.1
Total	643	

Many of these students lack school credits when they enter CAS. New York City, in accordance with New York State standards, requires 41 credits in prescribed areas, but as the September, 1985 profile of new admissions for that term indicate, the average number of prior completed credits was only 19.4. This class consisted primarily of both Juniors, who should have completed 19 credits and Seniors who should have completed 29 credits. Additionally, the average number of math and science credits completed was only 2.97 and 2.98 respectively out of a required 4 credits each. Juniors and Seniors are supposed to have completed these required subjects within their freshman and sophomore years. Thus, the profile of the entering CAS student is one of less achievement and accomplishment than the student's city and state-wide peers.

CAS is comprised primarily of Juniors and Seniors in high school. However, each applicant is processed on an individual basis so that some freshmen and sophomores are also served.

B. TRANSPORTABLE COMPONENTS AND DOCUMENTATION:

CAS consists of 5 components adaptable in whole or in part, depending on the size of the implementation desired and/or school district support services available. Schools choosing to replicate receive a Demonstration Manual consisting of the following:

1. Program descriptions of each component:
 - a. Administration
 - b. Admissions
 - c. Guidance
 - d. Resource Services
 - e. Student Services
2. Forms used to implement each component.

The Demonstration Manual is distributed at cost to replicating sites and the only cost to the school is reproducing the forms used.

CAS has been successfully operating for 14 years and has been replicated in Ithaca, NY, London, England, and Berlin, Germany. CAS has recently provided training, and is in the process of replicating the program, in Ventura and Sacramento, CA, and Portland and Glenover, Maine. Requests for information and visitors have come from all over the United States as well as from England, Japan, Egypt, Germany, Canada and Israel, providing a

strong indication that the CAS concept can be applied to a wider population.

C. USER REQUIREMENTS:

CAS must not be viewed as only for big cities that have vast resources. CAS is a process of learning that is applicable to any size community that is willing to view education in a much more expansive way (it has already been replicated in rural communities). Specifically, time must be set aside first, for a three-day training session (during which the components are demonstrated by the CAS staff trainers to orient the replicating site's staff as to how to implement the CAS model), and second, for at least one follow-up visit by the training staff. For a site to be certified as a Replication, it must use the CAS model of developing and monitoring of community resources as well as the curriculum design. All other components may be adopted as the situation dictates.

D. COSTS (For Implementation and Operation):

The table below presents, not costs, because these vary widely from district to district, but those items needed to install the CAS model. Each district may calculate their costs accordingly for both project installation and for subsequent years:

<u>Installation (6 months)</u> <u>(non-recurring costs)</u>	<u>Subsequent Years (per 30 students)</u> <u>(recurring costs)</u>
<u>Personnel</u>	<u>Personnel</u>
a. One full-time teacher	a. One full-time teacher
b. Substitute (for 3-days to relieve teacher for in- service training)	
Secretary (Part-time)	Secretary (Full-time)
Materials (Paper to reproduce CAS forms, photocopying machine)	Materials (Paper to reproduce CAS forms, photocopying machine)
Office Supplies	Office Supplies
Private Phone (to contact sites)	Private Phone (to contact sites)
Local Transportation (to visit sites)	Local Transportation (to visit sites)
Printing	Printing

CAS is allotted an approximate 19.6 to 1 pupil to teacher ratio.

IV. EVIDENCE:

A. CLAIM(S) STATEMENT(S)

CAS is not a band-aid for, nor an appendage to, the traditional secondary school; it is a major alternative that effectively represents a novel way to view the educational process. It is not aimed at those students who manage to "muddle through" or even enjoy the traditional setting; it is aimed at those students who have demonstrably withdrawn, acted out or turned off to school as it is presently operated. To change these students' behavior, CAS changed the institutional setting. To measure whether students' school-related behavior changed, CAS adopted a design that measured changes both before and during the program experience. Additionally, CAS students were compared to those students who were accepted to CAS, but, instead, chose to remain at their former high schools. Based on an analysis of permanent records, as a result of attending CAS for one school year, relative to controls, CAS participants:

1. Significantly increased their school attendance.
2. Had a significantly lower dropout rate.
3. Significantly increased the number of Carnegie units they attempted.
4. Significantly increased the proportion of Carnegie units they completed and passed.

B.1. METHODOLOGY (used in all Claims):

(A/B). DESIGN/SAMPLE:

1. Timing of data collection:

School records of CAS students and a relevant control group admitted to CAS but then who returned to their home schools, were compared on a pre-post basis in the treatment year, as well as to a baseline year used as a covariate.

2. Groups involved (Sample):

A computer-selected random sample (69 of 183) of the entering CAS class was compared to a relevant control group (13 of 13) which did not participate in the intervention. Students in both groups were identified as likely to benefit from CAS intervention and were admitted to either the Manhattan school or the Brooklyn school. The Control group was made up of those students from both schools who, after acceptance, chose not to attend CAS. For all indicators, the comparisons for the baseline year are similar for CAS students and controls.

(C/D). INSTRUMENTS/PROCEDURES/DATA COLLECTION:

In all cases, school records were used for comparisons because they are systematic, objective and standardized recording measures applied uniformly to both program participants and control students. The Project Director supervised the data collection and verification, while the New York City central Board of Education's Office of Educational Assessment and Evaluation, independently analyzed the results.

(E). DATA ANALYSIS/RESULTS:

Goal 1: Relative to Controls, CAS participants significantly increase their school attendance.

a. Evidence of Impact:

APPENDIX C, Table I provides the number of days absent for the CAS and control students, broken down by Manhattan students, Brooklyn students and Total, combined students. In all cases, CAS students exhibited significant decreases in the number of days absent from 1983-84 to 1984-85 ($p < .03$, $p < .01$ and $p < .001$ for Manhattan, Brooklyn and Total students respectively). The Control students, over the same period of time, showed virtually no changes in their number of absences (p -values in the .80 to .94 range). The treatment students whose behavior was analyzed were randomly selected from the combined Manhattan and Brooklyn classes of 1983-84. All Control students were included in the analysis.

APPENDIX C, Tables 2, 3 and 4 give the ANOVA results for Manhattan students, Brooklyn students and the combined Total of students respectively. The number of days absent in 1984-85 is compared for CAS students and a relevant Control group, adjusting for the number of days absent in 1983-84 (used as a covariate). For the Manhattan and Total subjects ANOVA results, the p -value of the Main Effects (Group) was less than .05 (.04 for Manhattan and .02 for the Total subjects) indicating that the number of days absent in 1984-85 was different between CAS students and Controls, adjusting for the 1983-84 number. For the Brooklyn subjects, the differences did not quite reach significance ($p = .12$) though, as seen in Table 1, the Brooklyn CAS students showed a drop of 22.7 days absent, on the average from 1983-84 to 1984-85 compared to a 2.5 average increase in days absent for the Control students.

Goal 2: Relative to Controls, CAS participants have a significantly lower dropout rate.

a. Evidence of Impact:

APPENDIX D, Table 1 provides a comparison of the percentage of dropouts for the CAS participants and the Control students during the 1984-85 school year. To put the results into perspective, the CAS student is one who has already been identified (see IIB, above) as a real or potential dropout. Yet, in spite of the poor prognosis, only 18.6% of CAS students dropped out, compared to 50% of the Controls. The difference in these two percentages was significant according to a Chi test ($p < .01$). The treatment students whose behavior was analyzed were randomly selected from the combined Manhattan and Brooklyn classes of 1983-84. All available Control students were included in the analysis.

Goal 3: Relative to Controls, CAS participants significantly increase the number of credits attempted.

a. Evidence of Impact:

CAS began with the assumption that before students could succeed, they needed to evidence a positive attitude about themselves as well as school. One such evidence is a willingness to attempt more credits. APPENDIX E, Table 1, provides the number of credits attempted for the CAS and Control students, broken down by Manhattan students, Brooklyn students and Total combined students. For the Manhattan students and the Total sample, the number of credits taken increased significantly ($p < .03$ and $p < .05$, respectively). For Brooklyn students, while the number of credits increased, this increase was not statistically significant. For the Control students, for the Manhattan and Total groups, a significant decrease in the number of credits was observed ($p < .01$ and $p < .001$ respectively). For the Brooklyn Control students, a decrease was observed, but this decrease was not statistically significant because of the small sample size of the subgroup. The treatment students whose behavior was analyzed were randomly selected from the combined Manhattan and Brooklyn classes of 1983-84. All available Control students were included in the analysis.

APPENDIX E, Tables 2, 3, and 4 give the ANOVA results for Manhattan students, Brooklyn students and the combined Total of students respectively. In each case, the number of credits attempted in 1984-85 is compared for CAS students and a relevant Control group, adjusting for the number of credits attempted in 1983-84 (used as a covariate). In each of the ANOVA results, the p-value of the Main Effects (Group) was less than .05 indicating that the number of credits attempted in 1984-85 was significantly different between CAS students and Controls, adjusting for the 1983-84 number. For the Manhattan and the Total subjects, the difference was even stronger, with a p-value of .001.

Goal 4: Relative to Controls, CAS participants significantly increase the proportion of Carnegie units they complete and pass.

a. Evidence of Impact:

APPENDIX F, Table 1, provides the proportion of Carnegie units passed for the CAS and Control students, broken down by Manhattan students, Brooklyn students and Total combined students. In all cases, CAS students exhibited highly significant increases in the proportion of Carnegie units passed from

1983-84 to 1984-85 ($p < .001$). The Control students, over the same period of time, showed a drop in the proportion of Carnegie units passed, though this drop was not statistically significant (p -values in the .43 to .65 range). The treatment students whose behavior was analyzed were randomly selected from the combined Manhattan and Brooklyn classes of 1983-84. All available Control students were included in the analysis.

Tables 2, 3 and 4 give the ANOVA results for Manhattan students, Brooklyn students and the combined Total of students respectively. In each case, the proportion of Carnegie units passed in 1984-85 is compared for CAS students and a relevant Control group, adjusting for the proportion of Carnegie units passed in 1983-84 (used as a covariate). In each of the ANOVA results, the p -value of the Main Effects (Group) was less than .01 indicating that the proportion of Carnegie units passed in 1984-85 was significantly different between CAS students and Controls, adjusting for the 1983-84 proportions. For the Brooklyn and the Total subjects, the difference was even stronger, with a p -value of .001.

2. SUPPORTING EVIDENCE:

Some additional educationally important indications about the CAS experience for this particular treatment group (the 1984-85 class reported above) include the fact that there were 4 New York State Regents Scholarship winners. Finally, a look at their performance on Standardized tests indicates:

NYC City-Wide Examinations (June, 1985)*

	Social Studies	English
Percentage Passing (CAS)	52.2	75.6
Percentage Passing (City-wide)	56.6	67.3

NY State Regents Examination (June, 1985)*

	Social Studies	English
Percentage Passing (CAS)	70.5	90.6
Percentage Passing (City-wide)	73.3	70.7

*Figures obtained from the NYC Board of Education, Office of Information Services. NYC gives City-Wide Exams in only Social Studies and English.

Scholastic Aptitude Test (SAT)**

	Mean Math	Mean Verbal
CAS	381	428
National	475	431
New York City	473	427

**Figures obtained from the Educational Testing Service, Princeton, NJ.

CAS students did much better than their City-wide and, equal to, their National counterparts in Verbal and English abilities (meaningful, career-related skills). While not radically different than their city-wide counterparts, the reality of somewhat lower math and social studies scores (content based subjects) was predictable given the lack of content background with which the students entered. One treatment year cannot erase a whole school career's deficiencies in technical subjects. Reading, on the other hand, is improved to above NYC standards because of the increased motivation on the part of

students to be proficient as interns.

The random sample of the 1984-85 group showed that:

85% of CAS students went on to the college of their first choice, although most, according to their intake interview, had no college aspirations when they entered CAS. Of the remaining students, 85% went on to some form of higher education.

40% obtained career-ladder jobs with people for whom they worked.

Statistics cannot do justice to what it means for a student to attend CAS. For that it is necessary to let those involved speak for themselves.

From some, the practical:

I like that we can test a field... the opportunities and possibilities are boundless... You learn so much more from communicating with someone in that field than you can in a closed classroom for an hour... .

Olivia Larrain

From others, the career awakening:

I've worked in hospitals, acting studios, been an assistant teacher and served with a Community Planning Board... It gave me a chance to be on the other side... It's not as easy as you'd think it would be... It's much harder. I've learned a lot of things --I have to admit.

Nesla Velovic

Attitudes toward school and self are illustrated by the following students, who noted:

I came here feeling like I was nothing... When I came here my self-esteem went up and I felt good about myself.

Angelina Phifer

The school is about a family situation... It offers that helping hand I didn't find at my old school.

Raul Fostero

What it is like for the staff was reflected in comments such as:

It's been a place where I've been allowed to function as an educator should... to grow, to experiment [and to] implement new ideas.

Bret Schlesinger

Students and staff aren't the only enthusiasts. Evidence the following comment by a long-time CAS site sponsor:

Our first [student]... is now working for us as our assistant marketing manager... I'm impressed with the program.

MetaData Publishing Co.

or from a parent:

I have two daughters who went through the program successfully... [The first was] exposed to courses that enabled her to choose interior design as her life's work --which she is now pursuing at Bennington (no snivling [sic.] little college) [and] the second, developed her writing skills to almost publishable quality...

Eugenie Gray

While these quotations give a sense of what CAS has done psychologically, who can calculate what the savings have been to a society where real and potential dropouts were, for the most part, "saved"? With absenteeism reduced (and consequent state aid obtained) and attitudes changed, real dollars were returned to the system. One final word; it is obvious that many public school children are fleeing the public schools to enter private ones. CAS seemingly reverses that trend. A full 30% of the 1984-85 entering class (56 of 183) left private schools to enter CAS: a statistic that has been increasing since 1976. If the number of students who come from out-of-town are included, the percentage rises to 44%.

C. INTERPRETATION AND DISCUSSION OF RESULTS:

1. RELATIONSHIP BETWEEN EFFECT AND TREATMENT:

CAS is a self-contained, independent, diploma-granting high school. Students transfer in from their home schools and spend 100% of their time with the CAS institutional design. The results reported herein, are direct descriptions of actual student behavior changes.

2. CONTROL OF RIVAL HYPOTHESES:

Students in both groups were identified as likely to benefit from CAS intervention and were admitted to either the Manhattan school or the Brooklyn school. The Control group was made up of those students from both schools who, after acceptance, chose not to attend CAS. A look at APPENDICES E and F shows that the 1983-84 figures for the number of credits taken and the proportion of Carnegie units passed are quite similar for CAS students and the Controls, but, by 1984-85, the figures are quite different. The similarity of the 1983-84 figures indicates the likelihood that the control groups used in this study were indeed relevant controls and that the observed differences were the result of the CAS intervention. Small differences on pretest measures were controlled for in the analysis of covariance.

3. EVIDENCE OF GENERALIZABILITY

The 1984-85 CAS group produced similar results to a CAS group examined in a 1980-81 JDRP Validation study (See APPENDIX C, Table 5, and APPENDICES D and F). In addition, since receiving its first JDRP certification, CAS set up a satellite school in another borough of NYC. The results for this branch reflect similar results to the original project.

D. SIGNIFICANCE OF RESULTS TO NEEDS:

In terms of Carnegie units which were passed, the treatment group improved its proportion of passed units by 73.6%, while the Control group was 15.2% worse. These results have been consistent with results found in the 1980-81 study. All of this occurred over a period of more than ten years. The improvement level has remained consistent in spite of a Board of Education mandate increasing the number of students attending CAS by three-fold. Given the rigorous quality of the CAS developed curriculum (see II, E. 3, above), and keeping in mind that the CAS students are attempting more credits, it is even more significant that the proportion of completion and pass rates is higher than the control group.

The analysis of absences reveal that the treatment group reduced its 1984-85 absence rate from 1983-84 by 29.6%; a figure that is statistically significant. This is consistent with the results found in the 1980-81 study. Additionally, these results occurred in spite of the increase in the proportion of "at-risk" adolescents accepted.

On the practical level, CAS students, on average, attended school two weeks more than they had the year before.

In the 1984-85 treatment group, 18.6% of the CAS treatment group dropped out. While it is unfortunate to have "lost" these students, it does show a very important reversal of an important New York City problem. When compared to the Control group, CAS students did better than the 50% registered by the Control Group and the 44% rate registered by NYC as a whole. Considering the population served by CAS (these are students identified by other high schools as potential dropouts), and the increased numbers, this is a significant number.

NOTES

- 1 See, for example, Ford Foundation, Matters of Choice: A Ford Foundation Report on Alternative Schools, pp. 3-7.
- 2 New York City, Regional Center for Planning and Innovation, The City As School: A Proposal For a New High School Program For New York City, (NY: 1971).
- 3 New York City Board of Education, The Chancellor's Center for Planning and Innovation, The City As School: A Proposal to the Ford Foundation For The Support of an Experimental Program Involving Student-Teacher Collaboration in the Planning of a New Kind of High School, (NY: 1972).
- 4 New York City Regional Center..., pp. i, 1-9.
- 5 Ibid., pp. 6-7.
- 6 New York City Board of Education..., p. 6.
- 7 Ibid., pp. 1-2.
- 8 For a full discussion of how the curriculum is set up and created, see United States Department of Education, National Center for Service Learning, Synergist, Fall, 1980, pp. 18-21.
- 9 New York City Board of Education..., pp. 1-2.
- 10 Because of the staff involvement with all aspects of the school, 11 former para-professionals have gone on to become teachers and 4 former teachers have gone on to supervisory positions.
- 11 TV documentaries (WNBC and WABC - TV)
Articles: (selected samples)

<u>New York Times:</u>	11/17/73; 2/14/78
<u>Nation's Schools:</u>	2/74
<u>New York Teacher:</u>	5/30/76; 1/21/85
<u>English Journal:</u>	10/76
<u>Synergist:</u>	Fall, 1980
<u>Social Science Record:</u>	9/81
<u>Daily News:</u>	10/28/83; 2/7/85
<u>New York Youth Connections:</u>	11/84
<u>Prospect Press:</u>	2/21/85
<u>Amsterdam News:</u>	3/8/86
<u>Newsday:</u>	3/25/86; 3/27/86; 4/25/86

APPENDIX A:

YEAR	FEDERAL	SOURCE(S) AND LEVEL(S) OF FUNDING BY YEAR:					LEVEL	ENRLMNT
		STATE	LOCAL					
1972-73			New York	City	Bd of Educatn		Not Avble	65
1973-74			"	"	"	"	\$186,726	123
1974-75			"	"	"	"	230,861	184
1975-76			"	"	"	"	273,576	260
1976-77			"	"	"	"	281,494	291
1977-78			"	"	"	"	356,160	319
1978-79			"	"	"	"	412,655	339
		ESEA IV-C						
		VI datn Gmt					10,029	
1979-80			"	"	"	"	408,030	346
		ESEA IV-C						
		Dismtn Gmt					54,868	
1980-81			"	"	"	"	498,180	398
		ESEA IV-C						
		Dismtn Gmt					50,857	
1981-82			"	"	"	"	609,679	429
1982-83			"	"	"	"	807,137	450
1983-84			"	"	"	"	1,012,820	470
1984-85			"	"	"	"	1,168,455*	470
1985-86			"	"	"	"	1,381,700*	626
	NDN Dismtn							
	Grant						47,901	

*includes start-up money for satellite school --non-recurring

APPENDIX C

TABLE 1

NUMBER OF DAYS ABSENT

CLASS	N	BASELINE 1983-84		TREATMENT YEAR 1984-85		DIFF.	t	p<
		X	SD	X	SD			
CAS, Manhattan	50	46.2	24.7	35.3	26.7	-10.9	-2.28	.03
Control, Manhattan	9	63.9	29.9	62.1	33.0	-1.8	-.22	.84
CAS, Brooklyn	19	51.8	24.6	29.1	28.8	-22.7	-3.38	.01
Control, Brooklyn	4	47.5	38.0	50.0	33.9	2.5	.29	.80
CAS, Total	69	47.7	24.6	33.6	27.2	-14.1	-3.58	.001
Control, Total	13	58.8	31.9	58.4	32.4	-.4	-.08	.94

TABLE 2

ANALYSIS OF VARIANCE: NUMBER OF DAYS ABSENT (Manhattan)

SOURCE OF VARIATION	Sum of Squares	df	Mean Square	F	p<
Main Effects (Group)	3480.4	1	3480.4	4.76	.04
Covariates (baseline)	4711.7	1	4711.7	6.45	.02
Explained Variance	8192.1	2	4096.1	5.61	.01
Residual	40925.7	56	730.8		
Total	49117.8	58	846.9		

TABLE 3

ANALYSIS OF VARIANCE: NUMBER OF DAYS ABSENT (Brooklyn)

SOURCE OF VARIATION	Sum of Squares	df	Mean Square	F	p<
Main Effects (Group)	1795.1	1	1795.1	2.66	.12
Covariates (baseline)	4529.1	1	4529.1	6.72	.02
Explained Variance	6324.2	2	3162.1	4.69	.03
Residual	13486.3	20	647.3		
Total	19810.4	22	900.5		

-cont.-

TABLE 4

ANALYSIS OF VARIANCE: NUMBER OF DAYS ABSENT (Total)

SOURCE OF VARIATION	Sum of Squares	df	Mean Square	F	p<
Main Effects (Group)	4667.0	1	4667.0	6.54	.02
Covariates (baseline)	8597.4	1	8597.4	12.0	.001
Explained Variance	13264.5	2	6632.2	9.29	.001
Residual	56392.0	79	713.8		
Total	69656.5	81*	860.0		

*Four records incomplete.

TABLE 5

ANALYSIS OF VARIANCE: NUMBER OF DAYS ABSENT 1980-81 and (1984-85)
(Consistency of Results between two studies conducted at different times.)

SOURCE OF VARIATION	df		Mean Square		F		p<	
	80-81	84-85	80-81	84-85	80-81	84-85	80-81	84-85
Main Effects (Group)	1	(1)	4877.03 (4667.0)		6.70 (6.54)		.05	(.02)
Covariates (baseline)	1	(1)	6502.43 (8597.4)		8.94 (12.0)		.01	(.001)
Explained Variance	2	(2)	5689.73 (6632.2)		7.81 (9.29)		.01	(.001)
Residual	42	(79)	727.73 (713.8)					
Total	44	(83)	953.27 (860.0)					

APPENDIX D

TABLE 1

DROPOUT RATES (1984-85)

	TOTAL	NUMBER OF DROPOUTS	NUMBER REMAINING	PERCENTAGE WHO DROPPED OUT
CAS	86	13	73	18.6%
Control	16	8	8	50.0%

Chi square (χ^2) = 6.96 df=1 p<.01

TABLE 2

DROPOUT RATES 1980-81 and (1984-85)

(Consistency of Results between two studies conducted at different times.)

	TOTAL	NUMBER OF DROPOUTS	NUMBER REMAINING	PERCENTAGE WHO DROPPED OUT
CAS, 1980-81	37	0	37	0.0%
CAS, 1984-85	86	13	73	18.6%
Control, 1980-81	18	5	13	27.7%
Control, 1984-85	16	8	8	50.0%

Chi square (χ^2), 1980-81 = 8.19 df=1 p<.01

Chi square (χ^2), 1984-85 = 6.96 df=1 p<.01

APPENDIX E

TABLE 1

NUMBER OF CARNEGIE UNITS ATTEMPTED

CLASS	N	BASELINE 1983-84		TREATMENT YEAR 1984-85		DIFF.	t	p<
		X	SD	X	SD			
CAS, Manhattan	50	10.2	3.64	11.8	3.70	1.6	2.25	.03
Control, Manhattan	11	9.6	2.41	5.5	4.39	-4.1	-3.70	.01
CAS, Brooklyn	20	9.7	3.74	10.2	4.05	.5	.34	.74
Control, Brooklyn	5	9.6	4.28	5.0	5.10	-4.6	-1.92	.13
CAS, Total	70	10.1	3.65	11.4	3.85	1.3	2.00	.05
Control, Total	16	9.6	2.96	5.4	4.46	-4.2	-4.16	.001

TABLE 2

ANALYSIS OF VARIANCE: NUMBER OF CARNEGIE UNITS ATTEMPTED (Manhattan)

SOURCE OF VARIATION	Sum of Squares	df	Mean Square	F	p<
Main Effects (Group)	348.0	1	348.0	23.6	.001
Covariates (baseline)	18.9	1	18.9	1.28	.27
Explained Variance	366.9	2	183.5	12.5	.001
Residual	854.6	58	14.7		
Total	1221.6	60	20.4		

TABLE 3

ANALYSIS OF VARIANCE: NUMBER OF CARNEGIE UNITS ATTEMPTED (Brooklyn)

SOURCE OF VARIATION	Sum of Squares	df	Mean Square	F	p<
Main Effects (Group)	106.5	1	106.5	5.74	.03
Covariates (baseline)	6.1	1	6.1	.33	.58
Explained Variance	112.6	2	56.3	3.03	.07
Residual	408.4	22	18.6		
Total	521.0	24	21.7		

TABLE 4

ANALYSIS OF VARIANCE: NUMBER OF CARNEGIE UNITS ATTEMPTED (Total)

SOURCE OF VARIATION	Sum of Squares	df	Mean Square	F	p<
Main Effects (Group)	461.8	1	461.8	29.14	.001
Covariates (baseline)	6.57	1	6.57	.41	.53
Explained Variance	468.3	2	234.2	14.7	.001
Residual	1318.8	83	15.9		
Total	787.1	85	21.0		

APPENDIX F

TABLE 1

PROPORTION OF CARNEGIE UNITS COMPLETED AND PASSED

CLASS	N	BASELINE 1983-84	TREATMENT YEAR 1984-85	DIFF.	t	p<
CAS, Manhattan	50	37.7%	61.5%	23.8%	4.55	.001
Control, Manhattan	11	35.3%	31.4%	- 3.8%	- .47	.65
CAS, Brooklyn	20	37.4%	74.7%	37.3%	5.86	.001
Control, Brooklyn	5	38.6%	29.3%	- 9.3%	- .69	.53
CAS, Total	70	37.6%	65.3%	27.7%	6.59	.001
Control, Total	16	36.3%	30.8%	- 5.5%	- .82	.43

TABLE 2

ANALYSIS OF VARIANCE: PROPORTION OF CARNEGIE UNITS COMPLETED AND PASSED (Manhattan)

SOURCE OF VARIATION	Sum of Squares	df	Mean Square	F	p<
Main Effects (Group)	.76	1	.76	7.86	.01
Covariates (baseline)	1.47	1	1.47	15.38	.001
Explained Variance	2.23	2	1.11	11.6	.001
Residual	5.58	58	.10		
Total	7.80	60	.13		

TABLE 3

ANALYSIS OF VARIANCE: PROPORTION OF CARNEGIE UNITS COMPLETED AND PASSED (Brooklyn)

SOURCE OF VARIATION	Sum of Squares	df	Mean Square	F	p<
Main Effects (Group)	.84	1	.84	14.14	.001
Covariates (baseline)	.37	1	.37	6.18	.03
Explained Variance	1.21	2	.61	10.2	.001
Residual	1.32	22	.06		
Total	2.53	24	.11		

TABLE 4

ANALYSIS OF VARIANCE: NUMBER OF CARNEGIE UNITS COMPLETED AND PASSED (Total)

SOURCE OF VARIATION	Sum of Squares	df	Mean Square	F	p<
Main Effects (Group)	1.50	1	1.50	17.4	.001
Covariates (baseline)	1.84	1	1.84	21.4	.001
Explained Variance	3.34	2	1.67	19.4	.001
Residual	7.15	83	.09		
Total	10.5	85	.12		

TABLE 5

ANALYSIS OF VARIANCE: NUMBER OF CARNEGIE UNITS COMPLETED AND PASSED, 1980-81 and (1984-85)
(Consistency of Results between two studies conducted at different times.)

SOURCE OF VARIATION	df		Mean Square		F		p<	
	80-81	84-85	80-81	84-85	80-81	84-85	80-81	84-85
Main Effects (Group)	1	(1)	15.42	(1.50)	26.0	(17.40)	.001	(.001)
Covariates (baseline)	1	(1)	17.22	(1.84)	29.03	(21.40)	.001	(.001)
Explained Variance	2	(2)	16.32	(1.67)	19.4	(9.29)	.001	(.001)
Residual	42	(83)	.59	(.09)				
Total	44	(85)	1.18	(.12)				